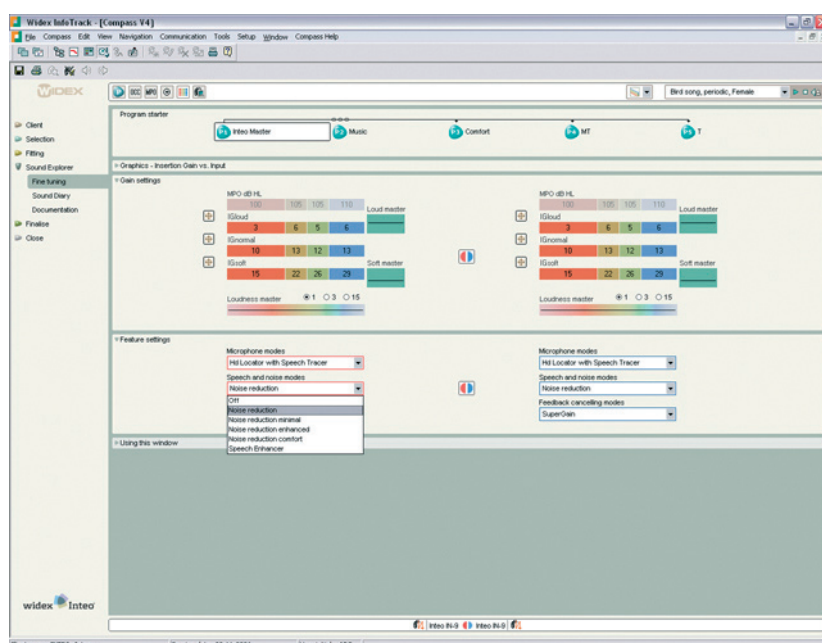


## Audiological Bulletin no. 16

The alternative settings of  
the Widex Classic Noise Reduction

News from Audiological Research and Communication

The speech and noise mode settings in the Fine tuning window include four alternative settings of the Widex Classic Noise Reduction. This bulletin describes these settings. The descriptions refer to the options in the Fine tuning window and include noise reduction, noise reduction minimal, noise reduction enhanced and noise reduction comfort. Please refer to Compass in order to see the details of the screen. Remember that Compass offers several help functions to explain the different options in the program: Tooltips, Using this window panels and the help manual.



If you wish to change the speech and noise mode setting away from the default Speech Enhancer setting in Inteo fittings, you have a number of other options in the Feature setting panel in Compass. Below is a short, but detailed, description of the choices you have at your disposal.

### Noise reduction

In this setting the noise reduction system operates as originally described with optimisation of the signal-to-noise ratio in the 15 channels. The maximum attenuation that can be achieved in each channel is 14 dB. Different noise levels in different bands trigger the noise reduction system. These levels range from 19-31 dB SPL. The maximum effect of the noise reduction algorithm is reached for noise input levels in each band ranging from 65 to 71 dB SPL. The net effect of this setting is that maximum comfort is provided in noisy environments and good speech quality is ensured when speech is present in noise.

### Noise reduction minimal

In this setting the noise reduction system is activated for a louder overall level of background noise compared to the normal setting. The noise reduction system is less active and the maximum attenuation that can be achieved in this setting is 8 dB. Different noise levels in different bands trigger the noise reduction system. These levels range from 20-35 dB SPL. The maximum effect of the noise

reduction algorithm is reached for noise input levels in each band ranging from 70 to 80 dB SPL. The effect of this setting is less noise reduction in noisy environments.

#### **Noise reduction enhanced**

In this setting the frequency shaping of the noise reduction algorithm is slightly different for this setting compared to the normal setting. The system is more active in the lower frequencies and less active in the higher frequencies. The maximum attenuation that can be achieved in this setting is 14 dB. In this setting the SIS function is less active. The noise reduction system is triggered at given noise levels in the different frequency bands. These range from 19-31 dB SPL. The maximum effect of the noise reduction algorithm is reached for noise input levels in each band ranging from 64 to 92 dB SPL. The net effect of this setting is that it provides more comfort in noisy environments compared to the normal setting.

#### **Noise reduction comfort**

This mode in Inteo is a noise reduction mode specifically designed to accommodate the user who wants listening comfort above anything else in any kind of noisy environment. This noise reduction mode is an added feature in Inteo that could be activated in a second listening program used for very noisy situations. In this setting the noise reduction is slow acting and does not comprise any SIS function. This setting is not appropriate as a default setting in the Master program, where we strongly recommend to use the Speech Enhancer. The Speech Enhancer uses the SII optimisation algorithm to ensure good speech intelligibility in all environments. Please note that the reported input levels that trigger the noise reduction scheme are relatively low because, in the input analysis, broadband noise signals are split into 15 bands.